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M.R.O. 1—82 400—23-11-59

MADRAS RECORD OFFICE.

Government of Madras.

Public (Works) DEPARTMENT.

Cons 1-12-57

G.O. No. 2250 Press Mis.

1209

Dated 1-12- 18 57

Not to be folded or roughly handled

No. 120. Read the following Extract from the Proceedings of the Chief Engineer dated 17th November 1857, No. 5281.

Read the following letters.

From Lieutenant J. MULLINS, District Engineer Nellore; to Colonel C. E. FABER, Chief Engineer, dated Camp Cancoopully, 9th November 1857, No. 2270.

SIR,

I have the honor to inform you that a breach has been made in the Pennair annicut by the freshes, which commenced increasing on the 2nd Instant, and by midnight of that day had risen to a height of 11 feet above the crown of the work, as reported in para. 6 of my letter No. 2189 dated 3rd Instant.

2. I visited the annicut on the 3rd 5th and 7th Instants, on which dates the depth of water on the crown was, 10¼′, 4′ 1″ and 2′ 11″ respectively, and at each of these visits, the appearance of the surface of the water between the centre and northern under sluices showed that something was wrong, but as I was unable to discover any difference between the level of the water at the site of the breach, and that going over the rest of the Annicut, I hoped that the damage, whatever it was, was not very serious. Yesterday the Annicut Superintendent reported that the water had fallen to 6 inches above the crown, and that there was a breach, right through the body of the annicut, of about 100 yards in length.

3. This morning I found the water 6 inches below the crown of the work, and I inspected the breach, one side of which is 13 feet from the North wing wall of the Centre sluice and extends about 100 yards towards the Northern sluices. Of this length for about 60 yards the annicut has been bodily swept away, and I fear that the wells, upon which the foundations of the front retaining wall are built, have been destroyed. For 20 yards on each side of this deep part the destruction is only partial, as although the front wall has fallen it remains in site and the wells under it will therefore, I hope, be protected from further injury.

4. Until the river subsides it will not be possible to form a correct estimate of the amount of damage done, as it is uncertain to what extent the rough stone work has been carried away, or how many wells will have to be re-built, but the gap to be filled up may be roughly calculated at.

		Rs.
100 yards × 30 yards × 2½ yards =	7000 Cubic yards of stone at Rupees 1-4 per cubic yards...	8,750
100 yards × 2 yards × 4 yards =	800 Cubic yards Laterite in chunam at 3-8 cubic yards...	2,800
Repairing wells.		300
	Rupees...	11,850

5. The lower apron and retaining wall is not yet visible, but, with the exception of the breach, the upper retaining wall and upper apron has remained perfectly firm, and the 3 sets of under sluices appear to have sustained no injury; and in consequence of this stability of ⅓th of the work I feel it difficult, from an inspection in the present state of the river, to offer an opinion as to the cause of the serious injury that has occurred, as the damage would perhaps had been more extensive had the section of the annicut been defective, while on the other hand, the firmness of the front retaining wall, and the enormous blocks in which it lies, in its present ruined state, (one piece is at least 9′×6′×5′) seems to preclude the Idea of the damage having commenced from the upper side of the work: still the most reasonable cause appears to me to be, that the force of these high* freshes washed away the 3rd or lowest rough stone apron, that this caused the 2nd, and afterwards the 1st retaining wall to fail, and that these the upper apron and ultimately the front retaining wall, fell an easy prey to the force of the water.

* The highest fresh upon this since the erection of the annicut was 7 feet, this fresh exceeded 11 feet.

6. An examination of the lower apron, which I hope in 2 or 3 days to be able to make will probably show whether this surmise is correct, and a further report, together with sections across the breached and adjacent parts will then be submitted. In the meantime rough stone, of the largest size procurable, will be thrown in as fast as possible, in order that the tanks under the annicut may be supplied as soon as the breaches in their bunds have been closed. I hope that by to-morrow or the next day 100 carts will be at work, and if, these throw in 300 tons of stone per diem the work will in 3 or 4 days be protected from further injury, and a small head of water will be obtained at the Head Sluice for the supply of the extensive cultivation under the Jaffer Sahib channel. In one month, if the freshes in the river are not severe, I trust that the breach will be closed entirely; the repair of the front retaining wall, and the resinking of the ruined wells, must be left until next March or April, as until about that time the river contains a good deal of water, which will be required for cultivation.

7. There are 1,000 or 1,500 cubic yards of roughstone on the north bank of the river, but much trouble and difficulty will be experienced in getting stone from the quarries, the Vagoor channel which on the quarry road is unbridged intervening; a temporary Bridge of Palmyrahs has been ordered to be erected forthwith, but as, in the present case, the cost of the rough stone would have been reduced one half had a Rail road existed, I would beg your consideration as to whether it would not be advisable to solicit sanction for the construction of the rail road, regarding which the correspondence marginally† noted took place, and which was finally disposed of by Government in Extract Minutes Consultation No. 299 dated 12th February 1857, as although perhaps it could not be completed in time for the closing of any part of the existing breach, it will probably be found prudent to strengthen the rough stone work of the apron, and should such be the case, the cost of the Railway would be saved twice over, and there could always exist a means of bringing down any quantity of rough stone, without delay, should another sad accident like that now reported occur, at any future time. The Railway might I think be ready, as a single line, in 2 months from the date of sanction, provided Rails (10,000 feet) could be supplied from the Civil stores at the presidency.

† Letter from Assistant Civil Engineer in chargo Nellore District; to the Chief Engineer, No. 220 dated 29th March.
Letter from Asst. to the Chief Engineer; to Asst. Civil Engr. in charge No. 2366 dated 8th April 1856.
Letter from Asst. Civil Engineer; to the Chief Engineer, No. 278 dated 14th April 1856.

8. As almost the only satisfactory intelligence, regarding irrigation works, which I have received, I am happy to be able to inform you that the breaches in the Nellore tank were last night reported closed, and that the tank will probably be again quite full in 2 or 3 days.

From Lieutenant J. MULLINS, District Engineer, Nellore; to Colonel C. E. FABER, Chief Engineer, dated Camp Cancoopully, 10th November 1857, No. 2317.

SIR,

I have the honor to annex Extracts from the General Observations of Assistant Overseer Jack showing the damage done to the Trunk road, between Sooloorpet* and Arumbank, by the floods of last month. These floods were due rather to the breaching of Tanks above the road, than to the natural drainage of the country, though, during the interval between the 11th and 26th October, a very heavy fall (about 30 inches) of rain occurred.

* 18 Miles.

	Yards.	
Between the Calinganady and Pamlah Calavah Bridge	80 × 11 × ½ =	440
6 Breaches, viz	80 × 12 × 2 =	1920
	50 × 6 × ½ =	153
	50 × 12 × 2 =	1200
	100 × 5 × ½ =	250
	80 × 3 × 2 =	480
At Wing walls of Pamlah Calavah Bridge	14 × 12 × 2 =	336
2 Breaches	30 × 12 × 2 =	720
A little further to the South 1 Breach	24 × 10 × ½ =	120
	Cubic Yards	5616

In the 47th mile, one wing wall of a Tunnel has fallen, otherwise the Road is in good order between the 48th, 45th miles.

2. In the 44th mile the 4 wings of an inverted arch have been carried away and the road breached at either end of the arch as follows, viz.:—

	Yards.
30 × 18 × 4 =	2160
50 × 18 × 4 =	3600
Cubic Yards...	5760

a little to the north of this arch there is a large breach

300 × 2 × 2 = 1200 yards

between this point and the 45th mile there are 5 breaches, viz.:—

	Yards.
40 × 11 × 1½ =	660
20 × 14 × 2 =	560
40 × 14 × 2½ =	1400
50 × 6 × 1 =	300
10 × 8 × 3 =	240
Cubic Yards...	3160

All the above damage appears to have been caused by the breaching of the Chamgoontah and Batanaveram Tanks in the Vencatigherry Zamindary.

3. In the 38th mile there are 10 breaches, viz.:—

Yards.		Yards.	
40 × 1 × ½ =	20	26 × 14 × 3½ =	1274
20 × 5 × 1½ =	150	80 × 4½ × 1½ =	540
90 × 5 × 1½ =	675	15 × 4 × 1 =	60
28 × 2 × 2 =	112	20 × 12 × 2 =	480
22 × 12 × 2 =	528	25 × 5 × 1 =	125
		Total Cubic Yards	3964

4. In the 37th mile there is one breach

Cubic Yards.

30 × 11⅓ × 1½ = 517½

caused by the Tocamoor Tank bursting.

5. Mr. Jack mentions that a boat was being used to cross passengers from one side to the other of the breach at the inverted arch mentioned in the 2nd para. above.

6. Every exertion was being made to repair these breaches and re-open the road, and much work had, I believe, been done by the close of the month, as the Postal Department reported no great obstacles in this District.

7. I have received no details of the damage done to the Road by the storm of the 1st and 3rd Instants, but I know that it must be very great, though I am glad to be able to state that Captain Watts reports no masonry works gone between Sooloorpett and the Kundlaroo (19 miles from Nellore,) and I have only heard of 1 tunnel having fallen north of that point, and this is one of the very old works, many of which are beyond repair, and will shortly require re-building. The embankments have suffered very severely, and up to 2 days ago the road was impassable for bandies.

From Lieutenant J. MULLINS, District Engineer Nellore; to Colonel C. E. FABER, Chief Engineer, dated Camp Cancoopully, 10th November 1857, No. 2299.

SIR,

In continuation of former reports, I have the honor to inform you that breaches in the undermentioned tanks have been reported by the Tahsildar of Survapully, and the Officer in charge of the Centre Executive Range.

Executive Range.	Talooks.	No. of Tanks breached.	Names of Villages.
Southern Executive Range.	Survapully.	3	Goodoor.
		1	Mungalapoor.
		1	Chennoor.
		2	Nellatoor.
		1	Odoor.
		1	Mootialapaud.
		2	Cadevadoo.
		1	Peddapadiah.
		1	Palagaunypaud.
		1	Vendoor.
Nellore range....	Survapully.	4	Juttlacondoor.
		2	Madamanooroo.
Nellore Executive Range.	Survapully.	1	Colleecoodooroo.
		1	Cuttavapully.
		3	Commalapoody.
		4	Canapoor.
		2	Buddavole.
		1	Goorevindapoody.
		1	Edagally.
		1	Poodepurty.
		2	Epoor.
		3	Edamapully.
		3	Aumuncherla.
		1	Dontallee.
		2	Golagamoody.
		1	Anakapully.
Centre Executive Range.	Caligherry.	3	Caukurlapaudoo.
		1	Goompurlapaudoo.
		1	Moostusphapoorum.
		2	Pedda Annaloor.
		3	Aravadoo.
		2	Goodipaud.
		1	Dundigam.
		1	Pundepaud.
		1	Cheramanah.
		1	Anasamoodrum.
		1	Vasaly.
	Sungum.	1	Paramana.
		1	Condamedycondooroo.
		1	Doovoor.
		1	Sungum.
		67	

Resolved in continuation of the Chief Engineer's Proceedings No. 5231, dated 16th Instant to forward for the information of Government, the foregoing letters from the District Engineer Nellore, reporting further the damages caused by the late heavy rains to several works in the District, and more especially to the lately constructed annicut across the Pennair at Nellore, the breach in which is of a very serious character; but which must be reported upon more at length hereafter, when the promised sections from the District Engineer shall have been received.

(Signed) C. E. FABER, Colonel,
Chief Engineer.

No. 121. ORDER THEREON, No. 2230; dated 1st December 1857.

Ordered that the foregoing Extract be recorded.

(Signed) H. FORBES,
Acting Secretary to Government.

Centre Circle
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No. 2270

From Lieut.t-Col.l Mullins

District Engineer Nellore

To

Colonel C. E. Faber.

Chief Engineer S.P.W.

Permr Irrigation

Sir,

I have the honor to inform you that a breach has been made in the Permanr Annicut by the freshes, which commenced increasing on the 2.d Instant, and by midnight of that day had risen to a height of 11 feet above the Crown of the work, as reported in para 6 of my Letter No.e 2189. dated 3.d Instant.

2. I visited the Annicut on the 3.d 5.th and 7.th Instants, on which dates the depth of water on the crown was, 10 f.t, 1'-1" and 2'-11" respectively, and at each of these visits, the appearance of the surface of the water, between the Centre and Northern under Sluices showed that something was wrong, but as I was unable to discover any difference between the level of the water at the Sides of the breach, and that going over the rest of the Annicut, I hoped that the damage, whatever it was, was not very serious as Yesterday

Yesterday the Overseer superintendent reported that the water had fallen to 6 inches above the crown, and that there was a breach, right Bank the body of the Anicut, of about 100 yards in length.

3 This morning I found the water 6 inches below the crown of the work, and I inspected the breach, one side of which is 13 feet from the (North) wing wall of the Centre Sluice, and extends about 100 yards towards the Northern Sluices. Of this length, for about 60 yards Westward has been totally swept away, and I fear that the wells, upon which the foundations of the front retaining wall were built, have been destroyed. For 30 yards on each side of this (both) sides the destruction is only partial, or although the front wall has fallen it remains in situ, and the wells under it will therefore, I hope, be protected from further injury.

It will be seen, however, it will not be possible to form a correct Estimate of the Amount of damage done, or it is uncertain, to rebuild the rough Stone work has been carried away, or how many wells will have to be rebuilt; but the gap is to be filled up may be roughly calculated at:

100 yds × 30 yds × 2 yds = 7000 Cubic yards of Stone at Rs 1. 4. — to Cyd } Rupees 8750 - - -

100 yds × 2 yds × 4 yds = 800 Cubic yards } 2800 - - -
Laterite in Chunam at 3 - 8 - per Cyd } 315
Repairing walls ——— 300 - - -
Rupees —— 11,850 - - -

5. The lower apron and retaining wall is not yet visible, but with the Exception of the breach, the upper retaining wall and upper apron has remained perfectly firm, and the 3 Sets of under Sluices appear to have sustained no injury; and in consequence of their Stability of 4 to 5 of the work I feel it difficult, from an inspection in the present State of the River, to offer an opinion as to the cause of the serious injury that has occurred, as the damage would perhaps have been more extensive had the Section of the Anicut been defective; while on the other hand, the firmness of the front retaining wall, and the enormous blocks in which it lies, in its present ruined State, (one piece is about 9' x 6' x 5') seems to preclude the idea of the damage having commenced from the upper side of the work: Still the most reasonable cause appears to me to be, that the force of these high freshes washed away the 3d or lowest rough Stone apron, that this caused the 2d, and afterwards the 1st retaining wall to fail, and that these the upper apron

and

* The highest fresh before the erection of the Anicut was 7 feet - this fresh exceeded 11 feet

and ultimately the front Retaining wall fall an easy prey to the forces of the water.

6 On Examination of the lower apron, which I hope in 2 or 3 days to be able to make, will probably show whether this surmise is correct, and a further report together with sections across the breached and adjacent parts will then be submitted. In the meantime Rough Stone of the largest size procurable, will be thrown in as fast as possible, in order that the Banks under the Arrivals may be supplied as soon as the breaches in their bunds have been closed. I hope that by tomorrow or the next day 100 carts will be at work, and if there thrown in 300 tons of Stone per diem, the work will in 3 or 4 days be protected from further injury, and a small head of water will be obtained at the Head Sluices for the supply of the extensive cultivation under the Superior Channels. In one month, if the freshes in the River are not severe, I trust that the breach will be closed entirely; the repair of the front Retaining wall, and the resinking of the ruined walls, must be left until next March or April, as until about that time the River contains a good deal of water, which will be required for cultivation.

Then

x Letter from Chief Engineer, Kellaas, District to the Chief Engineer No 220 dated 29th March

Letter from Chief Engineer to Capt. Cuthbert Engineer in charge No 233 dated 8th April

Letter from Chief Engineer to the Chief Engineer No 378 dated 9th April 56.

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5

7 There are 1000 or 1500 cubic yards of Rough Stone on the North bank of the River, but much trouble and difficulty will be experienced in getting Stone from the quarries the Nagpur Channels which on the quarry road is unbridged intervening; a temporary Bridge of Railway has been ordered to be erected for the with, but in the present case, the cost of the Rough Stone would have been reduced one half had a rail road existed, I would beg your consideration, as to whether it would not be advisable to solicit sanction for the construction of the rail road, regarding which the correspondence marginally noted took place, and which was finally disposed of by Government in Extract Minutes Consultations No 299 dated 12th Feby 56 although perhaps it could not be completed in time for the closing of any part of the existing breach, it will probably be found prudent to strengthen the Rough Stone work of the apron, and should such be the case, the cost of the Railway would be saved twice over, and there would always exist a means of bringing down any quantity of Rough Stone, without delay, should another sad accident take that now reported occur, at any future time. The Railway might I think be ready, as a single line in

No 5281

Extract from the Proceedings of the Chief Engineer in the Department of Public Works Fort Saint George Under date the 17th November 1857.

Read the following Letters.

From the District Engineer Nellore.

Reports that a breach has been made in the Cennair Annicut by the freshes which commenced to increase on the 3rd November 1857. } Encre Enclos. No 2370 dated 7th November/57

Ditto Ditto Ditto

Forwards Extract from the General Observations of Sub Overseer Zacks shewing the damage done to the Road between Nellore and Cummalumdigoy to Roads of Better Table. } Encre Enclos. No 2317 dated 13th November/57

Ditto Ditto Ditto

Reports that Breaches in certain Tanks have been brought to his notice by the Tahsildar of Kandukoor and the Officer in charge of the Rumbe Irrigation Cange. } Encre Enclos. No 2299 dated 11th November/57

Original Enclosure 3. 3 Letters.

Resolved, in continuation of the Chief Engineers Proceedings No 5231 dated 16th Instant to forward for the information of Government the foregoing Letters from the District Engineer Nellore, reporting further the damages

From
The District Engineer
Nellore
To
The Officiating Secretary
to Government
Public Department

Dated Nellore
Dec 2 1857

No 2578/57

Sir

I have the honor to inform you that a breach has been made in the Cennair Annicut by the Freshes which commenced increasing on the 2nd November 1857.

I have the honor to be
Sir
Your most obedient Servant
[illegible]
District Engineer

Nellore 2nd November 1857.

Rec'd 5th Dec 1857

damages caused by the late heavy rains to several works in the District, and more especially to the lately constructed Annicut across the Pennair at Nellore, the breach in which is of a very serious character, but which must be reported upon more at length hereafter, when the promised sections from the District Engineer shall have been received.

A True Extract

A. Ed. Fuller Colon
Chief Engineer.

To,

The Secretary to Government P.W.D.

Rec'd 5.11

Public Works 1857 Department
Consulting Engineer
No 2273

Extract from the Proceedings of
the Chief Engineer
to
The Secretary to Government
P.W.D.

Dated 17th November 1857
Received 17th November 1857
Station Cuttack 20th Long 58°55'66"
No 5281

Enclosures 3 Plans

Forwards for information

Letters from the District Engineer
Nellore, reporting the damages
caused by the late heavy rains
to several works in the District.

To be recorded
No 2230.
Secretary to Government
No 2230 dated 24th Nov 1857